Climate & Environment Assessment: Building an Evidence Base in Yemen

Courtenay Cabot Venton

November 2012

EVIDENCE ON DEMAND

CLIMATE & ENVIRONMENT
INFRASTRUCTURE | LIVELIHOODS

This Helpdesk Report has been produced by Evidence on Demand with the assistance of the UK Department for International Development (DFID) contracted through the Climate, Environment, Infrastructure and Livelihoods Professional Evidence and Applied Knowledge Services (CEIL PEAKS) programme, jointly managed by HTSPE Limited and IMC Worldwide Limited.

DOI: http://dx.doi.org/10.12774/eod_hd07.nov2012.venton

Report summary

Evidence on Demand was requested by DFID to carry out a climate and environmental assessment. This was for part of the Business Case for building an evidence base in Yemen by gathering high quality, nationally representative data on key poverty indicators and living conditions. The four options considered were:

Option 1: DFID funds and designs its own survey(s), to be collected through private firms / NGOs
Option 2: DFID supports priority official censuses and surveys to be conducted by the CSO, through some third party or parties
Option 3: DFID provides support to the CSO directly to use on its own priorities as stated in annual and multi annual plans
Option 4: DFID does nothing

The Climate and Environmental Assessment, completed by a consultant from Practical Action Consulting, identified climate and environment impacts, as well as opportunities, and added this evidence to the business case, with a clear conclusion that such high quality data was most likely to contribute to strong climate and environment opportunities.

Note to readers: Climate and Environment Assessments are used to ensure that climate and environment risks and opportunities are considered as part of the process in developing new DFID Business Cases. The CEA presented here is in draft form, as submitted by Evidence on Demand to DFID for quality assurance and approval by a DFID Climate & Environment adviser.

Climate & Environment Sensitivity Analysis

What is the likely impact (positive and negative) on climate change and environment for each feasible option?

***Table 3: Environmental Impacts and Opportunities*[1]**

Option	Climate change and environment risks and impacts, Category (A, B, C, D)	Climate change and environment opportunities, Category (A, B, C, D)
1	C	B
2	C	B
3	C	B
4	C	C

The proposed interventions contain no potential for detrimental environmental impact, except for the impact of emissions from vehicles travelling around Yemen to facilitate data collection. Because of the depth and breadth of the proposed surveys, this risk should be monitored and efforts sought to minimize the impact. It is already stated that this programme will use staff hired in the local area to the extent possible, and this is not only good practice, but should significantly help to minimise environmental impacts of field work.

Instead the interventions largely represent an opportunity for a positive climate/environment impact. Poor statistical information is a major limiting factor in dealing with environment and climate risks and opportunities. Inadequate information limits government and donor ability to detect and respond to trends in natural resources use. Poor statistics can also indirectly impact on the environment. For example, inaccurate figures about population density or traffic could lead to unwise planning for resource intensive industries (such as water, infrastructure and agriculture). Put simply, better statistics can mean better planning which in turn is more likely to be sustainable.

The risk and benefit is broadly similar for all three options. Clearly, under option 1, there is greater DFID control to influence the information gathered in the survey, and hence ensure that data is gathered that can contribute to good climate/environment stewardship. However, there is a greater possibility that this independence would lessen the buy in from the government. For options 2 and 3, DFID has less control, but there is greater likelihood that the data is used more widely. Hence the three are all ranked equally for the climate and environment assessment.

It is therefore recommended that DFID works with the CSO to influence the process, to the extent possible, to ensure that the surveys include questions that can contribute to positive climate and environment outcomes, for example:

- *In relation to nutrition, food security and cash transfers.* How people use the land to get their food can have significant environmental impacts, and can also be heavily affected by climate change through changing rainfall patterns and other extreme events that affect crop productivity, in turn affecting food security. There are a range of agricultural practices that promote good environmental stewardship while increasing land productivity, such as soil and water conservation techniques, and drip irrigation. Data collection on agricultural practices, and household economies (i.e. how they use and buy food within their household), are critical for designing programmes that can strengthen food security and protect the environment.

[1] Categorised as A, high potential risk / opportunity; B, medium / manageable potential risk / opportunity; C, low / no risk / opportunity; or D, core contribution to a multilateral organisation.

- Further, in the case of food aid for food security, environmental impacts can be significant depending on where food is sourced from, and how it is sourced. Data collection on the number of families dependent on food aid, and their location, can help to identify ways to improve the environmental impact of food and nutrition interventions. Importantly, it can also help to identify ways to facilitate cash transfers as an alternative approach, and one that can significantly reduce environmental impacts by allowing households to buy their food requirements locally.
- *In relation to water.* Good data on water availability, quality and access is key to designing water programmes based on strong environmental and climate principles. Water supply is likely to be highly impacted by climate change due to changes in groundwater availability, and in turn, water supply can have significant environmental impacts if it is poorly managed. Well-designed water projects, based on a sound understanding of availability and need, can help to protect the environment by ensuring good water management. Data should include indicators such as source of water, water consumption for different activities (human, animals, productive, etc.), prevalence of water borne diseases, and time spent fetching water.
- *In relation to sanitation.* Poor sanitation practices are responsible for contaminating the environment, through practices such as open defecation, which in turn result in poor health in the community. Good data on sanitation practices and cultural issues around sanitation are key to designing programmes that improve sanitation, not only by installing appropriate infrastructure, but through ensuring that sanitation practices are taken up by the community and actually result in behaviour change.
- *In relation to natural resource management.* Communities are highly dependent on natural resources for their livelihoods. Land for agriculture and grazing, and water for drinking and irrigation have been covered above. Another key natural resource that is often exploited is forest resources – most often for their fuelwood for cooking. Data on fuels used, types of stoves used for cooking, and time spent collecting fuelwood, as well as levels of deforestation or resource depletion, can provide the data required to design programmes that take pressure off this resource.

Annex B Climate & Environment Checklists

Impact of Climate Change on Intervention	Y/N	Detail	Measure
Positive			
Opportunity for economic growth through development and dissemination of technologies	N		
Opportunity for job creation	N		
Increased revenue generating opportunities	N		
Opportunity for new agriculture and livelihood options	N		
Negative			
In a climate sensitive area?	Y	There is some possibility that surveys will be undertaken in areas that are climate sensitive, but it is unlikely that this will pose any risk to the activity	None required
In an area subject to frequent climatic shocks / variability (floods/droughts/temperature)	Y	See above	None required
In an area where climate change could lead to conflict	Y	See above	None required
Community has poor capacity to deal with or adapt to climate change or shocks	Y	See above	None required
Programme dependant on specific climatic condition (agriculture, aquaculture)	N		
Climate sensitive policies / laws / regulations result in social / development impacts	N		

Impact of Environment on Intervention	Y/N	Detail	Measure
Positive			
Dependant on environment / natural resources for success	N		
Good governance of natural resources would improve likelihood of success	Y	Improved data on human footprint on natural resources could help improve governance.	Data collected needs to be distributed and used in policy and practice.
Improved revenue generating opportunities	Y	Improved data on income and opportunities could help improve revenue generating opportunities.	Data collected needs to be distributed and used in policy and practice.
Improved environmental management could increase the number of benefits from intervention	N		
Environmental management offers peace-building opportunities	Y	Conflicts over land and resources potentially could be reduced with better access to information and data	Data collected needs to be distributed and used in policy and practice.
Negative			
Dependant on environment / natural resources for success	N		
In an area subject to environmental degradation?	Y	There is some possibility that surveys will be undertaken in areas that are climate sensitive, but it is unlikely that this will pose any risk to the activity	None required
In an area subject to frequent environmental shocks	Y	See above	None required
Community lack capacity to deal with environmental degradation or shocks	Y	See above	None required
Community dependant on natural resources, which will be affected by	N		

the intervention for their livelihoods			
Property / land-rights are not well defined / governed	N		
Environmental policies/laws/regulations result in social / development impacts	N		
In an area where natural resources are a potential source of conflict	Y	See above	None required

Impact of Intervention on Climate Change	**Y/N**	**Detail**	**Measure**
Positive			
Increases mitigation capacity	N		
Reduces Co2 emissions	Y	Information on use of fuels for cooking and lighting can be used to design interventions and policies which reduce emissions.	Data collected needs to be distributed and used in policy and practice.
Provides an opportunity to achieve low-carbon development?	Y	Information on local characteristics can be used to identify low carbon development opportunities.	Data collected needs to be distributed and used in policy and practice.
Negative			
Increases CO2 emissions	Y	Collecting the data requires travel to all parts of the country.	Use of vehicles for travel will be monitored, and the most efficient (cost and fuel efficient) modes of transport that are logistically sensible will be used.
Decreases mitigation capacity	N		
Does not support low-carbon development	N		

Impact of Intervention on Environment	Y/N	Detail	Measure
Positive			
Depends on natural resource use for its success	N		
Opportunity for improved environmental management	Y	Information collected can be used to improve environmental management.	Data collected needs to be distributed and used in policy and practice.
Opportunity to achieve MDG7	Y	See above.	See above.
Opportunity for co-financing of environmental management	N		
Negative			
Depends on natural resource use for success	N		
In an environmentally sensitive area	N		
Causes direct and significant impact on environment	N		
Risks causing significant negative impact on environment	N		

Impact of Intervention on vulnerable Communities	Y/N	Detail	Measures
Positive			
Opportunity to reduce the vulnerability of communities to climate change?	Y	The types of data collected can be instrumental in effective decision making for reducing vulnerability and increasing resilience.	Survey design needs to include indicators that can provide information to target vulnerable communities, and this needs to be integrated into policy and practice.
Opportunity to build the capacity of communities to adapt to climate change?	Y	See above.	See above.
Opportunity to build the resilience of communities to climate change?	Y	See above.	See above.
Opportunity to mitigate climate change impacts for a community?	Y	See above.	See above.
Negative			
Reduces adaptive capacity of a community to climate change	N		
Reduces resilience of a community to climate change	N		
Increases vulnerability of communities to climate change?	N		
Reduces capacity of a community to mitigate climate change	N		